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FINAL

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) VALUES ASSESSMENT FOR OPERABLE UNIT 2

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA) JET PROPULSION LABORATORY (JPL) PASADENA, CALIFORNIA

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ACRONYMS AND ABBREVIATIONS

ARAR	applicable or relevant and appropriate requirement
bgs	below ground surface
CAA	Clean Air Act
Cal-EPA	State of California Environmental Protection Agency
Caltech	California Institute of Technology
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
CCl_4	carbon tetrachloride
DCE	1,1-dichloroethene
DOJ	Department of Justice
DTSC	Department of Toxic Substances Control
FFA	Federal Facilities Agreement
Freon 113	1,1,2-trichloro-1,2,2-trifluoroethane
FS	Feasibility Study
FWEC	Foster Wheeler Environmental Corporation
HHRA	human health risk assessment
JPL	Jet Propulsion Laboratory
MCL	maximum contaminant level
NA	no action
NAAQS	National Primary and Secondary Ambient Air Quality Standard
NASA	National Aeronautics and Space Administration of 1969
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEPA	National Environmental Policy Act
NPL	National Priorities List
OU	operable unit
PTO	permit to operate
RAO	remedial action objective
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
ROD	Record of Decision
RWQCB	Regional Water Quality Control Board

SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SVE	soil vapor extraction
SWRCB	State Water Resources Control Board
TCE	trichloroethene
U.S. EPA	United States Environmental Protection Agency
VOC	volatile organic compound

1.0: INTRODUCTION

This National Environmental Policy Act of 1969 (NEPA) Values Assessment accompanies the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) remedial documentation for Operable Unit 2 (OU-2) at the National Aeronautics and Space Administration (NASA) Jet Propulsion Laboratory (JPL). The NASA JPL is located near Pasadena, CA. The Council on Environmental Quality (CEQ) and the Department of Justice (DOJ) have advised that federal agencies should integrate NEPA values into the CERCLA process when feasible and appropriate (DOJ, 1995). This NEPA values assessment is being submitted concurrently with the Proposed Plan for the remediation of OU-2 (i.e., all on-site vadose-zone soils at JPL), and will be made available for public review as part of the administrative record. Also, the NEPA values addressed in this report will be integrated into the Record of Decision (ROD) for OU-2.

1.1 Background

JPL is located between the city of LaCanada-Flintridge and the unincorporated city of Altadena, near Pasadena, CA (see Figure 1). JPL comprises about 176 acres of land and more than 150 buildings and other structures. Most of the northern half of JPL is not developed because of steeply sloping terrain. The main developed area is the southern half of the site. The northeastern part of JPL is currently used for project support, testing, and storage. The southwestern part is used mostly for administrative, management, laboratory, and project functions.

JPL is a NASA-owned facility where the California Institute of Technology (Caltech) performs research and development projects. JPL also serves as the federal government's lead center for research and development related to robotic exploration of the solar system. In addition to work for NASA, tasks are conducted at JPL for other federal agencies in areas such as remote sensing and astrophysics.

During execution of past projects, various chemicals (including laboratory chemicals, solvents, solid and liquid rocket propellants, and cooling tower chemicals) and other materials were used at the JPL site. During the 1940s and 1950s, many buildings maintained "seepage pits," which are subsurface areas used to dispose of liquid and solid sanitary wastes collected from drains and sinks within the buildings. Some of the seepage pits may have received volatile organic compounds (VOCs) and other waste materials that currently are found in vadose-zone soils and groundwater at JPL. In the late 1950s and early 1960s, a sewer system was installed at JPL, and the use of seepage pits for waste disposal was discontinued.

In 1980, analyses of groundwater from City of Pasadena water-supply wells located in the Arroyo Seco, near JPL, revealed the presence of VOCs. At about the same time, VOCs also were detected in two water-supply wells at the Lincoln Avenue Water Company, located downgradient of JPL. Subsequently, site investigations were conducted at JPL (Ebasco, 1990a and 1990b) and VOCs were detected in on-site groundwater at levels above drinking-water standards. In 1992, JPL was placed on the United States Environmental Protection Agency's (U.S. EPA's) National Priorities List (NPL) of CERCLA sites (Federal Register Page 47180).

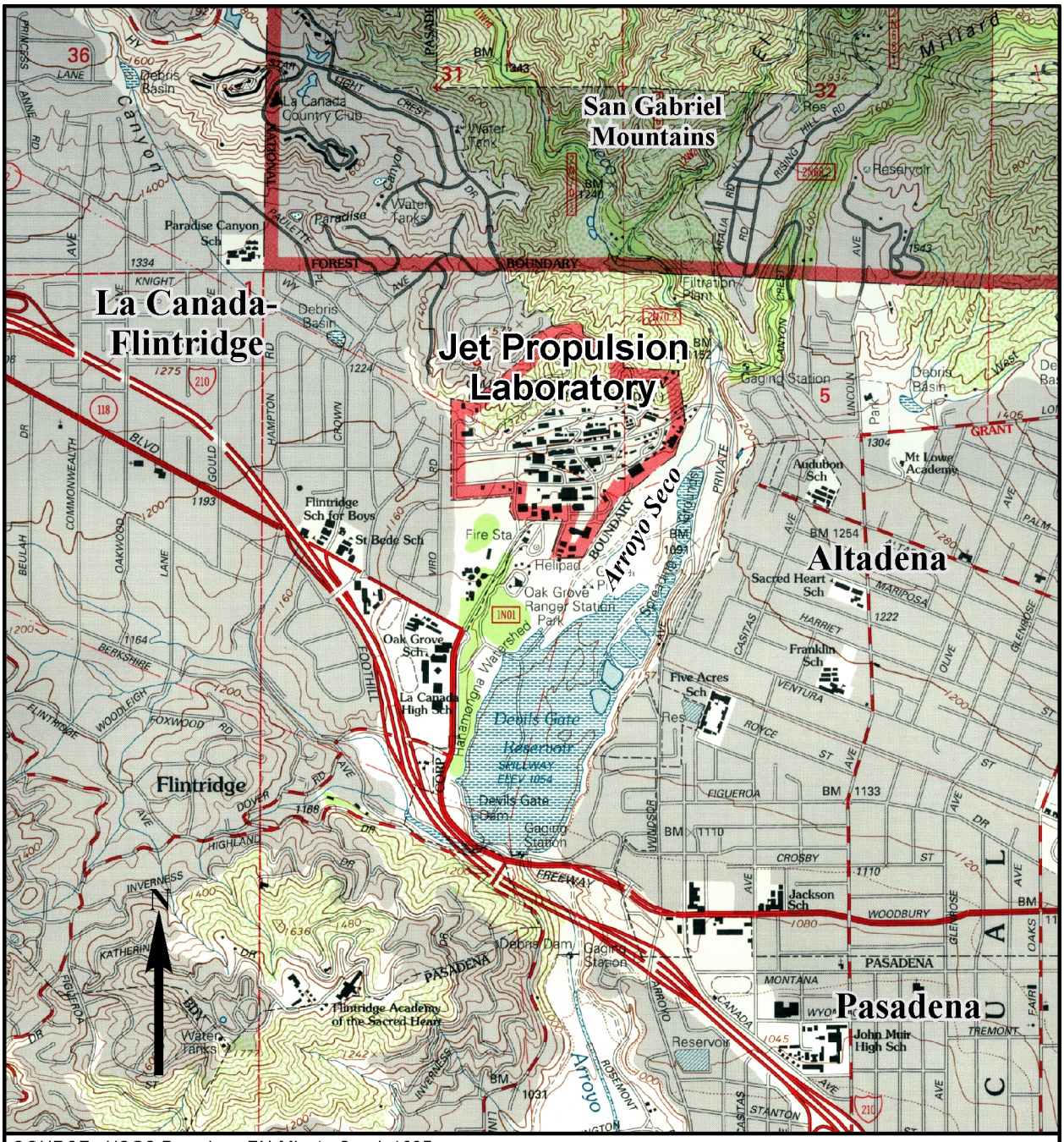

Figure 1. Map of JPL and the Surrounding Area

After being placed on the NPL, potential source areas were investigated from 1994 to 1998 during the Remedial Investigation (RI) phase, which included nine sampling events. The RI phase was followed by the Feasibility Study (FS) phase, which involved risk evaluation, data interpretation, and evaluation of an ongoing soil vapor extraction (SVE) pilot test.

The operable unit addressed in this NEPA Values Assessment, OU-2, is the second of three operable units at JPL. OU-2 consists of all on-site vadose zone soils at JPL. The first operable unit, OU-1, encompasses all on-site groundwater at JPL. The third operable unit, OU-3, consists of all off-site groundwater adjacent to JPL. OU-1 and OU-3 will be addressed separately from OU-2, and not in this NEPA Values Assessment. Cumulative impacts of implementing all remedial actions at the site are addressed.

1.2 Purpose and Need

Under CERCLA, NASA must determine the appropriate action to remediate impacts to the environment associated with VOCs in vadose-zone soils at JPL. This document accompanies CERCLA documentation for OU-2 and serves to integrate NEPA values into the CERCLA process for the remedial action.

1.3 Applicable Statutes and Regulations

This section discusses the federal, state, and local environmental statutes and regulations that are applicable or relevant and appropriate (ARAR) to the remedial action at OU-2. A complete discussion of ARARs can be found in the Feasibility Study for OU-2 (FWEC, 2000).

1.3.1 National Environmental Policy Act of 1969, as Amended

This document is prepared in compliance with NEPA, as amended, and the Council on Environmental Quality Regulations for Implementing NEPA (40 CFR Parts 1500-1508). It is prepared to comply with NEPA through the assessment of selected NEPA values associated with the remediation of OU-2, vadose zone soils at JPL.

1.3.2 Other Federal Regulations

A Federal Facilities Agreement (FFA) under CERCLA Section 120 was executed by NASA, the U.S. EPA Region 9, the State of California Department of Toxic Substances Control (DTSC), and the Regional Water Quality Control Board (RWQCB), Los Angeles Region in 1992 (U.S. EPA, 1992). The FFA lists JPL as a Resource Conservation and Recovery Act (RCRA)/CERCLA site requiring further evaluation using an investigation/assessment process that integrates and combines the RCRA Facility Investigation Process with the CERCLA RI process to determine the actual or potential impact.

Federal environmental regulations considered to be ARARs were identified as part of the CERCLA process. These ARARs will be used to establish standards, consistent with the National Oil Hazardous Substance and Pollution Contingency Plan (NCP), for any remedial actions at OU-2, unless waived. Appendix A provides a summary of all identified federal

ARARs and the impacts that those requirements will have on the design and administration of the JPL OU-2 remediation project.

1.3.3 State and Local Regulations

State and local environmental regulations that are considered ARARs have been identified and will be used to establish standards that are consistent with the NCP for any remedial actions at JPL OU-2, unless waived. Appendix A provides a summary of all identified state ARARs and the impact that those requirements will have on the design and administration of the JPL OU-2 remediation project.